Split DataFrame into Groups Based on School Code and Class

Aim

To write a Pandas program that splits a given dataframe into groups based on school code and class.

Algorithm

1. Import the required libraries (pandas)
2. Create a sample dataframe with student information including school code and class
3. Use the groupby() function to group the dataframe by school code and class
4. Iterate through the groups and print each group

Code

```
import pandas as pd

data = {
    'school_code': ['s001','s002','s001','s002','s001','s002'],
    'class': ['V', 'V', 'VI', 'VI', 'VI', 'VII'],
    'name': ['Alberto Franco','Gino Mcneill','Ryan Parkes', 'Eesha Hinton', 'Gino Mcneill', 'David Parkes'],
    'date_of_birth': ['15/05/2002','17/05/2002','16/02/1999','25/09/1998','11/05/2002','15/09/1997'],
    'age': [12, 12, 13, 13, 13, 12],
    'height': [173, 192, 186, 167, 151, 159],
    'weight': [35, 32, 33, 30, 31, 32],
    'address': ['street1', 'street2', 'street3', 'street4', 'street5', 'street6']
}

df = pd.DataFrame(data)

grouped = df.groupby(['school_code', 'class'])

for name, group in grouped:
    print(f"School Code: {name[0]}, Class: {name[1]}")
    print(group)
    print()
```

Output

```
School Code: s001, Class: V
 school_code class       name date_of_birth        age    height  weight address
0        s001     V  Alberto Franco    15/05/2002   12     173      35   street1

School Code: s001, Class: VI
```

```
 school_code class       name date_of_birth      age    height  weight address
2        s001    VI   Ryan Parkes    16/02/1999   13     186      33   street3
4        s001    VI  Gino Mcneill    11/05/2002   13     151      31   street5

School Code: s002, Class: V
  school_code class     name date_of_birth       age    height  weight address
1        s002     V  Gino Mcneill    17/05/2002   12     192      32   street2

School Code: s002, Class: VI
  school_code class     name date_of_birth       age    height  weight address
3        s002    VI  Eesha Hinton    25/09/1998   13     167      30   street4

School Code: s002, Class: VII
  school_code class     name date_of_birth       age    height  weight address
5        s002   VII  David Parkes    15/09/1997   12     159      32   street6
```

Result

The program successfully splits the dataframe into groups based on school code and class. Each group is displayed separately, showing the relevant information for students in that specific school and class combination.